FIG. 1

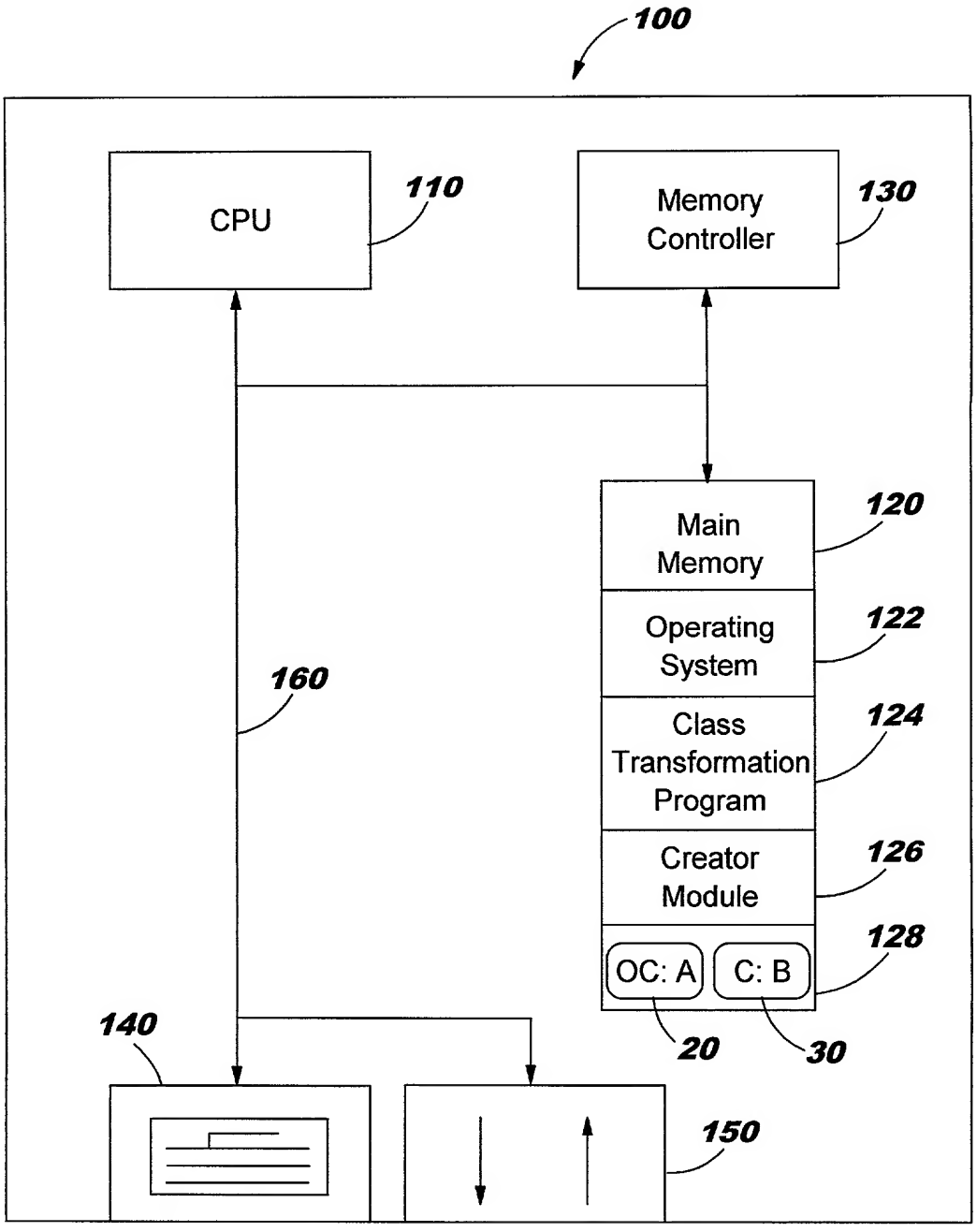

100
CPU
110
Memory Controller
130
Main Memory
120
Operating System
122
160
Class Transformation Program
124
Creator Module
126
OC: A
C: B
128
20
30
140
150

FIG. 2

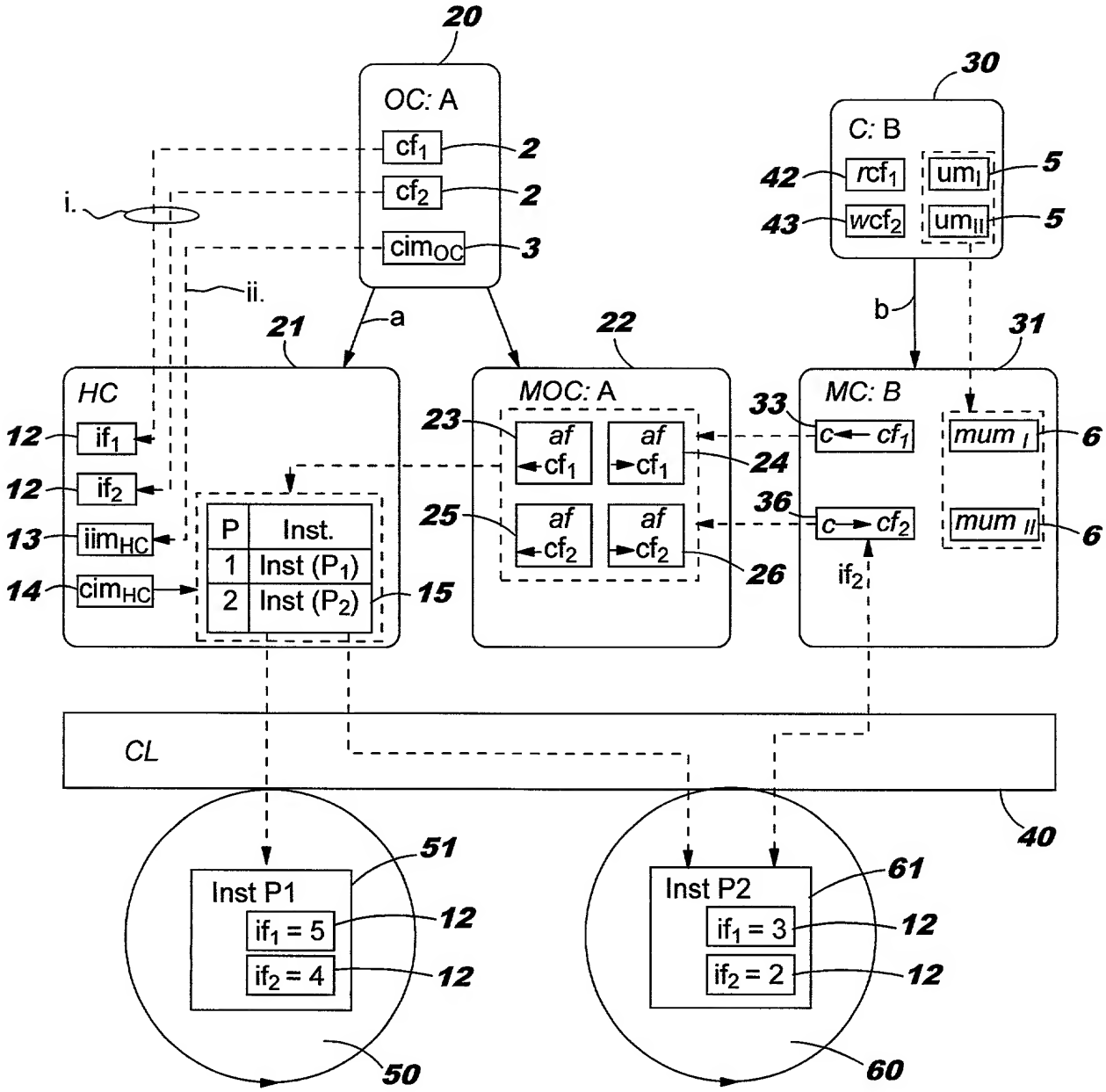

20
OC: A
cf1
cf2
cimOC
2
2
3
i.
ii.
a
21
22
30
C: B
rcf1
wcf2
umI
umII
42
43
5
5
b
31
HC
if1
if2
iimHC
cimHC
12
12
13
14
P
Inst.
1
Inst (P1)
2
Inst (P2)
15
MOC: A
23
af cf1
af cf1
24
25
af cf2
af cf2
26
MC: B
33
c cf1
mum I
6
36
c cf2
mum II
6
if2
CL
40
Inst P1
if1 = 5
if2 = 4
12
12
51
50
Inst P2
if1 = 3
if2 = 2
12
12
61
60

FIG. 3

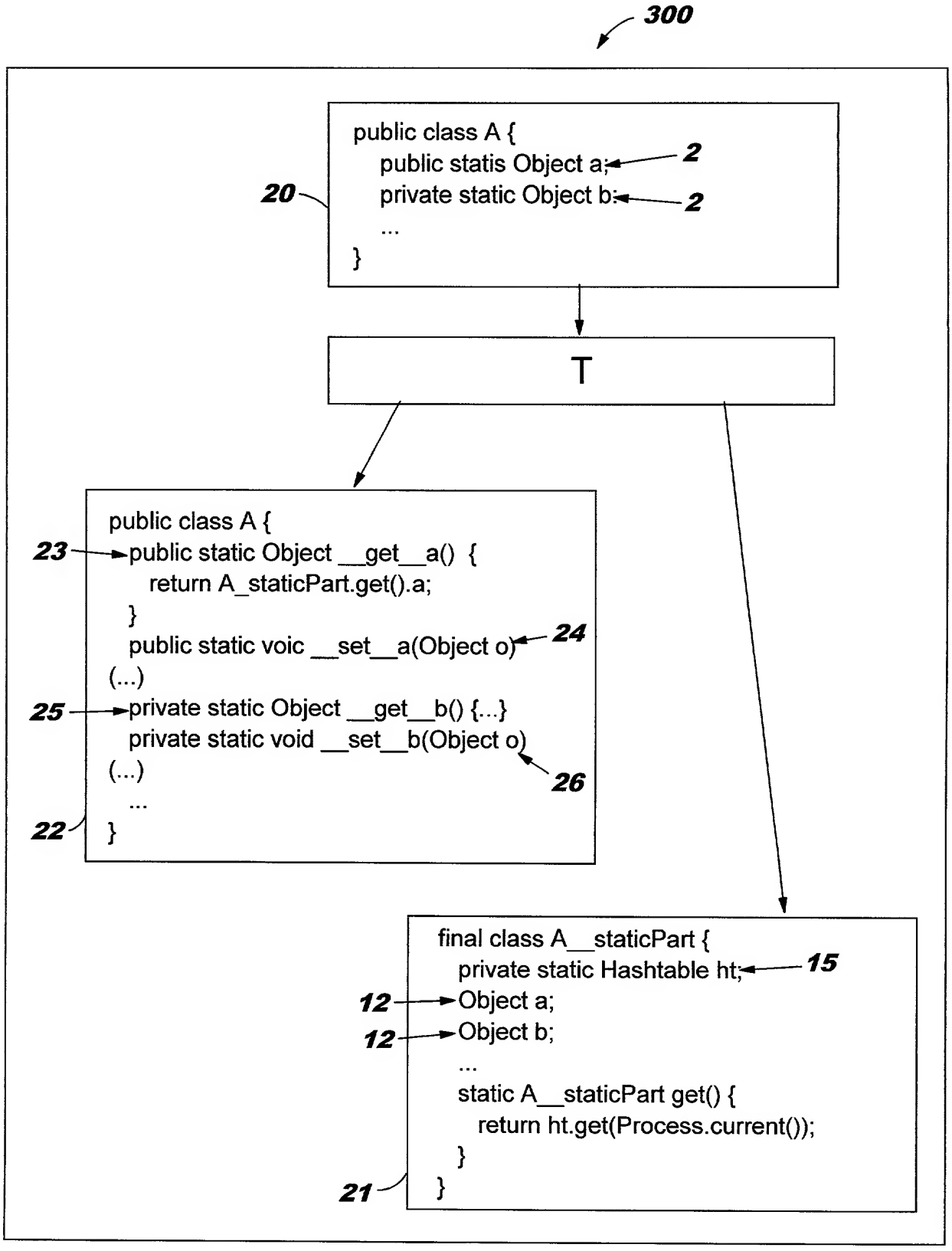

300
public class A {
public statis Object a;
2
20
private static Object b;
2
...
}
T
public class A {
23
public static Object __get__a() {
return A_staticPart.get().a;
}
public static voic __set__a(Object o)
24
(...)
25
private static Object __get__b() {...}
private static void __set__b(Object o)
26
(...)
...
22
}
final class A__staticPart {
private static Hashtable ht;
15
12
Object a;
12
Object b;
...
static A__staticPart get() {
return ht.get(Process.current());
}
21
}

FIG. 4

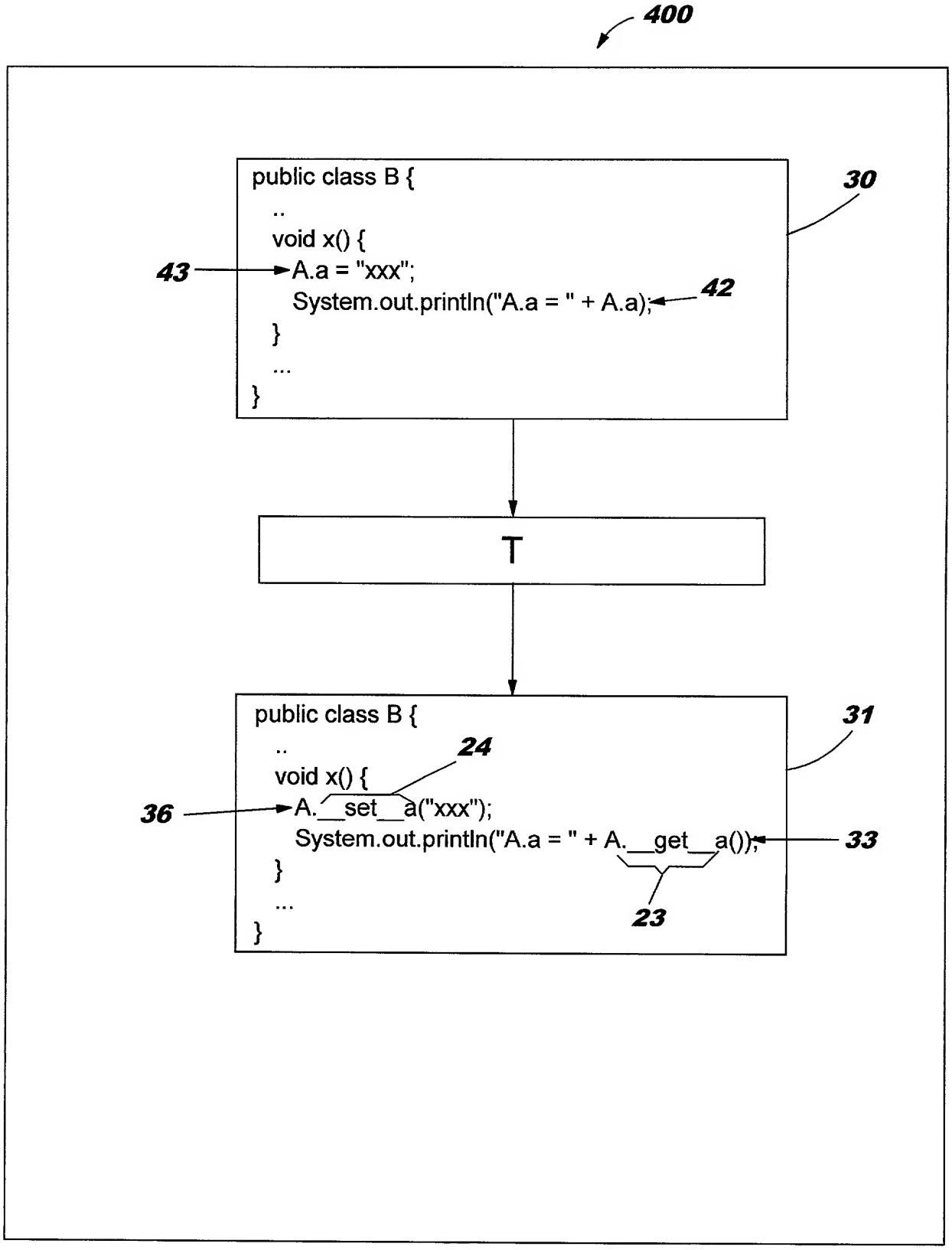

400
public class B {
..
void x() {
A.a = "xxx";
System.out.println("A.a = " + A.a);
}
...
}
30
43
42
T
public class B {
..
void x() {
A.__set__a("xxx");
System.out.println("A.a = " + A.__get__a());
}
...
}
31
24
36
33
23

FIG. 5

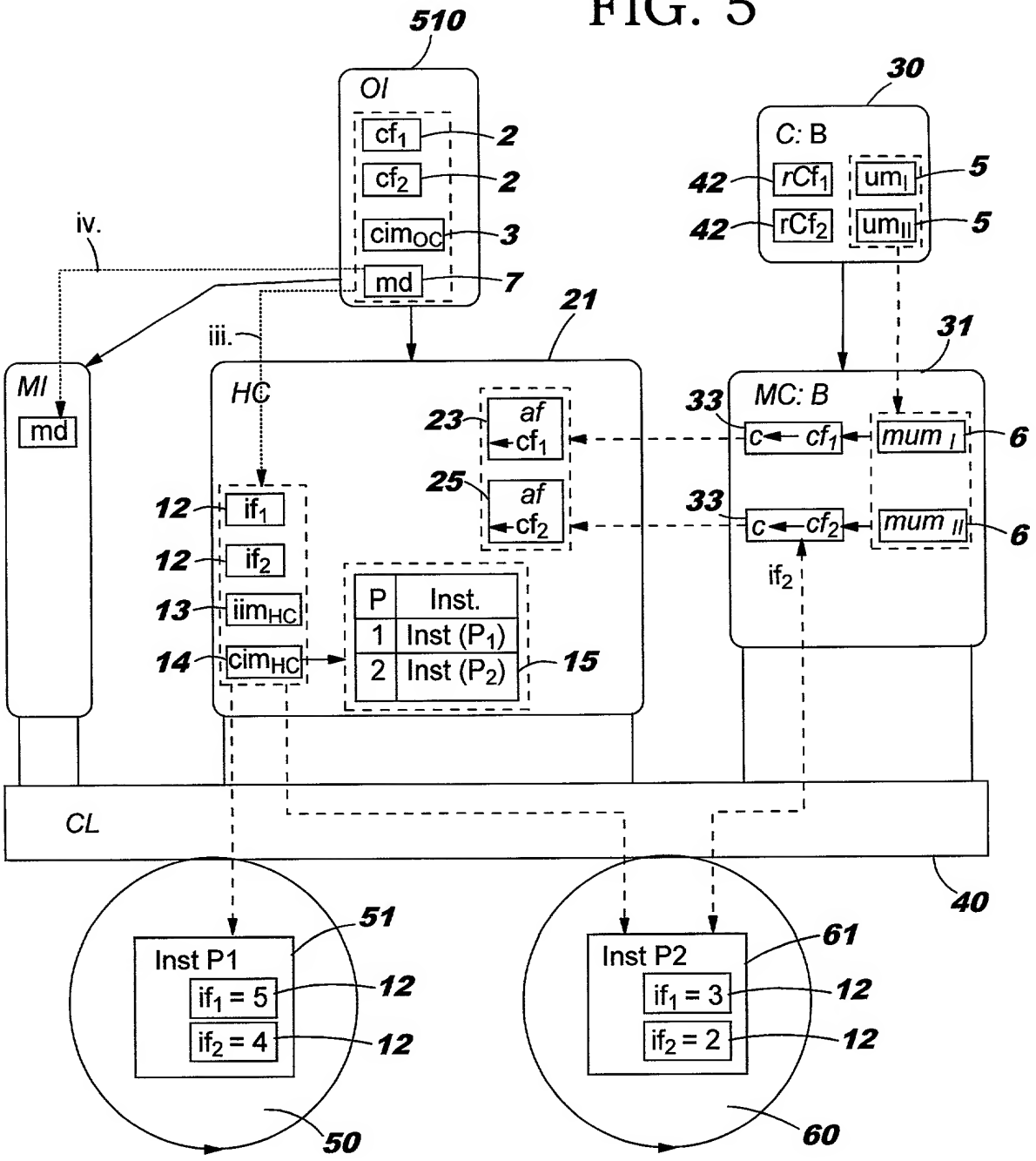

510
OI
cf1
cf2
cimOC
md
2
2
3
7
iv.
iii.
21
30
C: B
42
rCf1
rCf2
umI
umII
5
5
31
MI
md
HC
MC: B
33
c
cf1
mum I
6
23
af
cf1
25
af
cf2
33
c
cf2
mum II
6
12
if1
12
if2
13
iimHC
14
cimHC
P
Inst.
1
Inst (P1)
2
Inst (P2)
15
if2
CL
40
51
Inst P1
if1 = 5
if2 = 4
12
12
50
61
Inst P2
if1 = 3
if2 = 2
12
12
60

FIG. 6

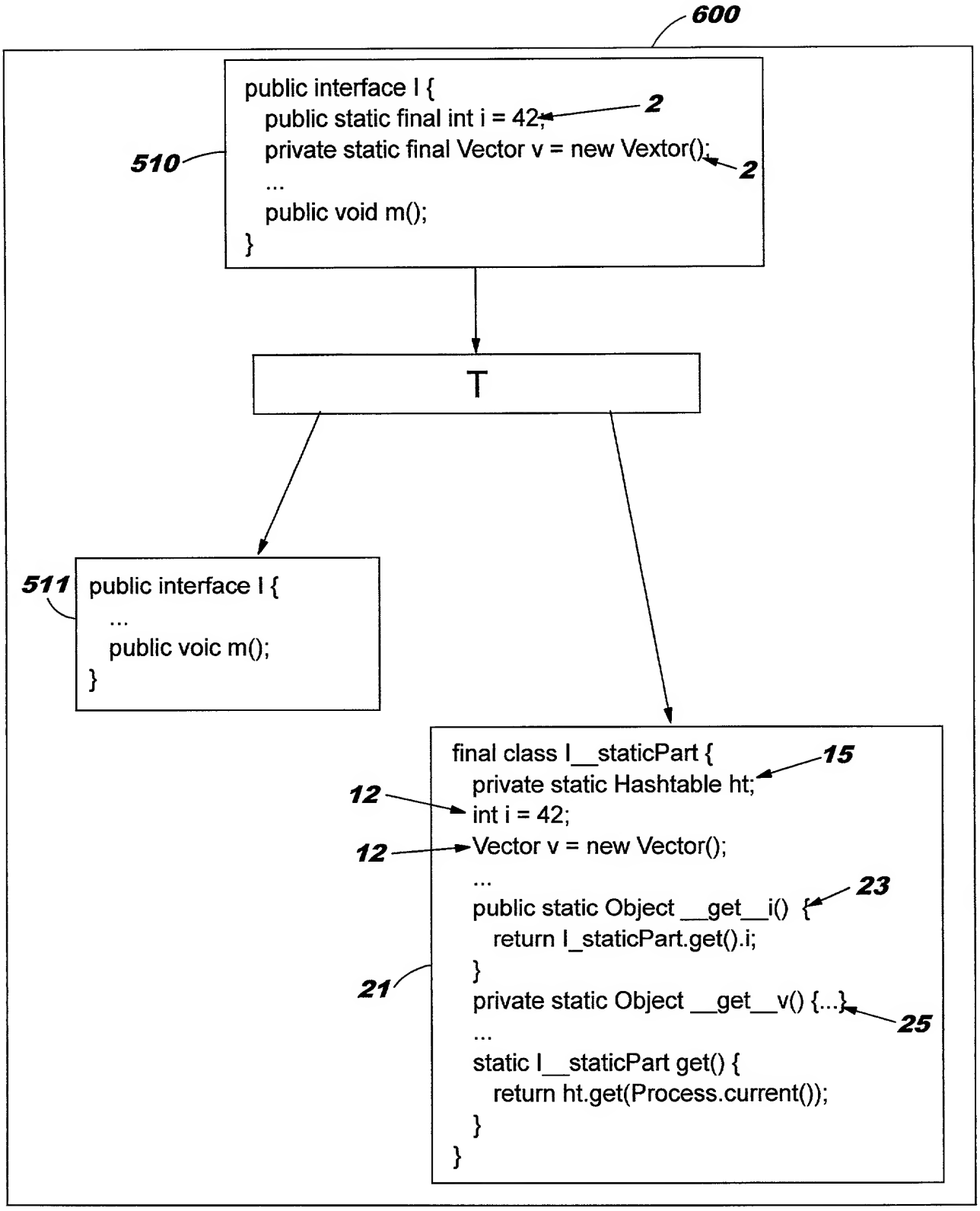
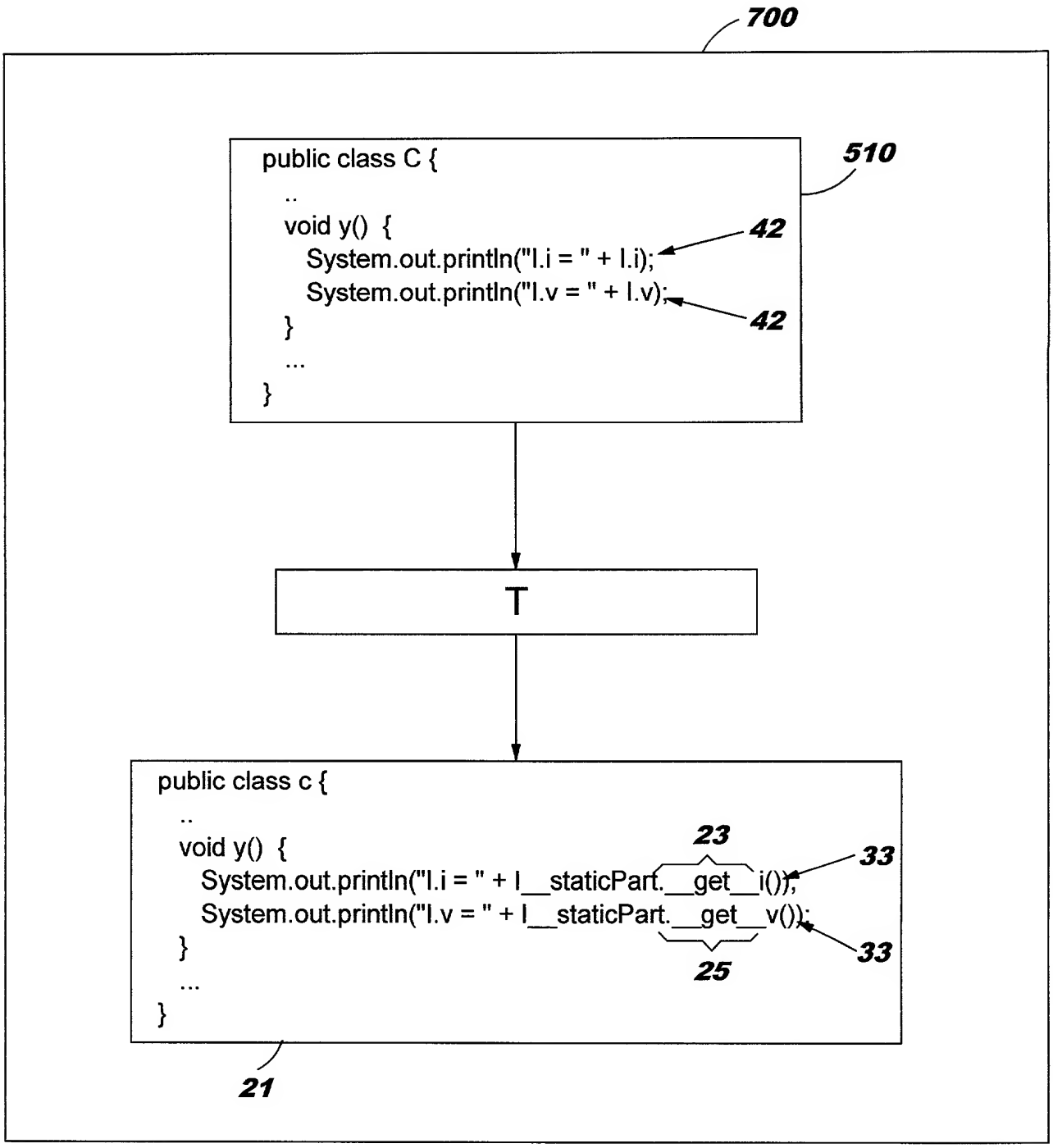

600
public interface I {
public static final int i = 42;
2
private static final Vector v = new Vextor();
2
...
public void m();
}
510
T
511
public interface I {
...
public voic m();
}
final class I__staticPart {
15
private static Hashtable ht;
12
int i = 42;
12
Vector v = new Vector();
...
23
public static Object __get__i() {
return I_staticPart.get().i;
}
21
private static Object __get__v() {...}
25
...
static I__staticPart get() {
return ht.get(Process.current());
}
}

FIG. 7


700
510
public class C {
..
void y() {
System.out.println("I.i = " + I.i);
System.out.println("I.v = " + I.v);
}
...
}
42
42
T
public class c {
..
void y() {
System.out.println("I.i = " + I__staticPart.__get__i());
System.out.println("I.v = " + I__staticPart.__get__v());
}
...
}
23
25
33
33
21